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photoconductive material layer to be exposed to stimulated emission emitted from the stimuable phosphor sheet upon exposure to stimulating light, and detecting electric charges generated in the photoconductive material layer upon exposure to the stimulated emission by applying an electric field to the photoconductive material layer, wherein the improvement comprises the steps of using a solid image sensor whose photoconductive material layer also exhibits electric conductivity upon exposure to recording light bearing thereon image information or momentary light emitted from the stimuable phosphor layer upon exposure to the recording light, projecting the recording light onto the stimuable phosphor sheet while applying an electric field to the photoconductive material layer, and detecting charges generated in the photoconductive material layer when the recording light or the momentary light impinges upon the photoconductive material layer, thereby obtaining a preliminary read-out image signal bearing thereon image information.

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59. (Amended) The image read-out system of claim 8 wherein the fluctuation suppressing means corrects the image signal according to the fluctuations of a voltage power source during read-out of the image signal.

Please add the following new claims:

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62. (Amended) An image read-out method of obtaining an image signal bearing thereon image information by use of a stimuable phosphor sheet having a layer of stimuable phosphor which emits stimulated emission in proportion to the stored energy of radiation upon exposure to stimulating light and a solid image sensor having a photoconductive material layer

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which exhibits electric conductivity upon exposure to the stimulated emission from the stimuable phosphor sheet and by scanning with stimulating light a stimuable phosphor sheet which has been exposed to radiation and has stored thereon an image, causing the photoconductive material layer to be exposed to stimulated emission emitted from the stimuable phosphor sheet upon exposure to the stimulating light, and detecting electric charges generated in the photoconductive material layer upon exposure to the stimulated emission by applying an electric field to the photoconductive material layer, wherein the improvement comprises that

said stimuable phosphor sheet has a layer of stimuable phosphor which is stimulated by stimulating light in a wavelength range of not shorter than 600nm and emits stimulated emission in a wavelength range of not longer than 500nm,

said solid image sensor has a photoconductive material layer whose major component is a-Se,

wherein said electric field generates an avalanche amplification effect in the photoconductive material layer, and detecting electrical charges generated in the photoconductive material layer occurs simultaneously with the avalanche effect.

63. (Amended) An image readout method as defined Claim 31, wherein:

said stimuable phosphor sheet has a layer of stimuable phosphor which is stimulated by stimulating light in a wavelength range of not shorter than 600nm and emits stimulated emission in a wavelength range of not longer than 500nm,

said solid image sensor has a photoconductive material layer whose major component is a-Se,

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end
wherein said electric field generates an avalanche amplification effect in the
photoconductive material layer, and detecting electrical charges generated in the
photoconductive material layer occurs simultaneously with the avalanche effect.
